

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

COMMENTS OF CELPLAN TECHNOLOGIES, INC.

August 4, 2019

**Amendment of the Commission's Rules to Promote Aviation Safety
WT Docket No. 19-140**

I- ABOUT CELPLAN TECHNOLOGIES

CelPlan Technologies, Inc is a US company that specializes in telecommunications technology and design of telecommunication networks. CelPlan has developed design and optimization software to design, optimize and analyze interference between wireless networks. This software is used by companies all around the world, from operators, equipment vendors and engineering companies. CelPlan itself have designed thousand of networks, many of them using WiMAX technology.

CelPlan has developed CellAircraft that analyzes the impact of ground generated interference to aircrafts and suggests site location to provide Internet service to the aircrafts. This software is used today by a major telecom company that provides telecom services to aircrafts. CelPlan software analyzes aggregated ground to satellite interference and vice versa, which is used today by the industry. CelPlan has designed AeroMACS networks for the Dallas and Boston airports (not deployed yet).

CelPlan is one of the pioneers in the WIMAX arena having written a book "LTE, WiMAX and WLAN Network Design, Optimization and Performance Analysis" published by the renowned publisher Wiley.

CelPlan has several patents and awards, being appointed as one of the most promising technology solution providers for the Telecom Industry in 2019, by the magazine CIO Review.

CelPlan feels comfortable, due to its experience, to comment and contribute to FCC's Rules to Promote Aviation Safety, focusing on the AeroMACS section.

II- CELPLAN COMMENTS

CelPlan addresses each one of the FCC questions in the table below. FCC's questions are in bold and Celplan comments in Italic.

1	In particular, how do the administrative costs and administrative benefits of our proposed licensing scheme compare to those of registering in a separate database?
	<i>CelPlan believes that AeroMACS operations could be done under part 95, with site registration and approval by the spectrum manager. This will imply in a simpler, faster and more economical procedure.</i>
2	How do the safety benefits compare?
	<i>The safety benefits will be the same in our opinion.</i>
3	How should we expect that costs will be allocated to airport owners and operators?
	<i>The owner of the site should be responsible for the licensing costs.</i>
4	Grant AeroMACS licenses to airport owners and entities that that have been granted permission by the airport owner. This may include airline carriers, aeronautical communications network providers or other third-party network access providers, and entities that perform airport services and engage in communications for the purpose of safety and regularity of flight (such as snow removal and deicing). We seek comment on this proposal, and on whether to extend eligibility to other entities?
	<i>Celplan foresees that different entities will deploy sites in an airport, which might integrate into the same core. The core may be operated by the airport owners or other mutually agreed to third party.</i>
5	We also seek comment on whether to delineate or limit the entities to which airport owners and operators can grant permission, or in the alternative, whether the eligibility of entities other than airport owners and operators should be determined by the FAA during the application coordination process discussed below?
	<i>CelPlan believes that restricting access now, may be premature as the system will evolve and new users may be forthcoming. The validity of a user should be judged during the application coordination process. Anyway, at a minimum the following non-federal entities should be considered for equal permission to apply to the Spectrum Coordinator (Channel Manager) for a channel(s) allocation: Aeronautical Communication network Providers (ACNP), manufacturers, airlines and aeronautical support service providers. Each of these entities may operate different locations in the airport, so they may have interest in deploying their own sites.</i>
6	We seek comment on how AeroMACS spectrum should be coordinated among non-Federal users, and between Federal and non-Federal users?
	<i>An independent not-for-profit spectrum manager is required to do this coordination, considering traffic requirements, area of performance and other related factors. We believe this spectrum manager should be appointed by the Commission.</i>
7	Proponents of a third-party coordinator should recommend specific rules to govern the selection, eligibility, and responsibilities of such a coordinator?
	<i>A spectrum manager should be ideally a nonprofit organization with deep knowledge of the WiMAX technology and that is involved in its standardization and testing.</i>
8	Commenters also should address whether we should designate a channel manager on a nationwide or regional basis, and whether more than one entity should be authorized at any location?
	<i>It should be national to assure that the same criteria apply everywhere.</i>

9	We also seek comment on any alternative or additional channel management methods that commenters believe we should consider. Commenters should discuss the costs and benefits of any alternatives they address.
	<i>We believe that having a national channel manager is the best solution.</i>
10	We seek comment on how to implement this sharing arrangement, and its costs and benefits?
	<i>A qualified entity should request to the channel manager access to the spectrum and provide its estimated traffic demand geographically. The channel manager will verify if the installed network can accommodate the requested traffic and inform if it can be allocated or if a network expansion is required. The channel manager should approve all network expansions. Periodically, the spectrum usage will be verified by the channel manager and the spectrum resources should be adjusted to the real usage. This will maximize fair spectrum usage at minimum cost.</i>
11	We seek comment as to whether technical parameters for aeronautical mobile telemetry should be incorporated in the Commission's part 87 rules to further facilitate compatible operation.
	<i>Yes, they should.</i>
12	We note that AeroMACS must operate in accordance with ITU Resolution 748 (Rev. WRC-12), which incorporates ITU-R M.1827-1. We observe that proposed section 87.604 includes individual base station power limits, and we seek comment on whether these limits can be expected under typical deployment scenarios to limit aggregate interference sufficiently
	<i>The channel manager should request or perform this analysis to assure that the limits re respected.</i>
13	We ask whether any additional or alternative technical rules are needed to ensure the compatibility, interoperability, or efficient operation of AeroMACS users.
	<i>No additional ruling is required now. Some need may arise during operation.</i>
14	We also invite comment on how best to ensure that our AeroMACS rules are technology-neutral and flexible
	<i>The AeroMACS technology is defined internationally. Its rules should be uniform worldwide to assure problem free operation to all.</i>
15	Commenters should address specific aspects of the proposed rules, such as the channel plan, transmitter power levels, and emission mask
	<i>FCC specifications are correct.</i>
16	We seek comment on whether, in lieu of setting forth technical criteria in our rules, we should incorporate by reference the relevant international standards. Commenters favoring this option should identify all standards that should be incorporated and address any practical or legal issues associated with such incorporation by reference
	<i>FCC should have its own rules, that will be then adopted by international standards. Relying only on international standards is leaving to much power to other countries. The Commission could incorporate the International Standards by reference or restate them in it Report and Order.</i>

III- CONCLUSION

CelPlan appreciates FCC allowing contributions and comments to its decision process, and we are honored in contributing to it.

The need of aircraft to ground and ground to ground communications is long overdue and the Commission rules will allow the trouble-free implementation of the AeroMACS networks in a short time.

AeroMACS implementation will increase safety, reduce costs, improve efficiency and improve user satisfaction.

CelPlan is proud of participating in this process.

Respectfully submitted,

LEONHARD KOROWAJCZUK

By:

A handwritten signature in black ink, appearing to be 'LK', is written over a horizontal line.